EXPRESSION

IN THE

TREATMENT OF TRACHOMA.

BY

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MR. PRESIDENT AND GENTLEMEN:

It is my pleasure in this paper to call your attention to a method employed in the treatment of chronic follicular trachoma, which has found its way into few of the journals and none of the text-books, but which, in my opinion, takes the lead among the remedies employed against this intractable disease. This process is the expression or enucleation of the follicular contents.

The first reference to this subject which is to be found in literature occurs in Graefe's Archive für Ophthalmologie 1883, in which Mandelstamm, a Russian oculist, speaks of the efficacy of squeezing, in the treatment of trachoma, by means of the thumbs. "The lid being everted and held by the thumb of the left hand, the nail of the right thumb is placed in the retrotarsal fold. The two thumbs are now pressed against one another, including the lid and part of the reflected mucous membrane, thereby squeezing out the follicular contents and breaking down their walls." This announcement of Mandelstamm made little if any impression and the idea might still have remained dormant but for an accidental discovery made by Dr. F. C. Hotz, of Chicago, two years before the appearance of the publication of Mandelstamm. He published his observation in the following words, in Knapp's Archives of Ophthalmology, June, 1886, "At this time," he says, "an exceedingly nervous patient with follicular trachoma and acute pannus came under my care. A violent spasm of the orbicularis set in when I turned the upper eyelid, and as I pushed the everted lid upward in order to obtain a better view of the retrotarsal portion, I observed that the contents of the numerous trachoma

follicles were squeezed out by the pressure of the orbicularis, in the form of gelatinous plugs, and by assisting this pressure a little with the thumb, I succeeded in thoroughly emptying all the follicles. The next day I was actually surprised by the remarkable improvement. All acute irritation was gone, the photophobia and the heavy pressure of the lids had disappeared; the eyes were opened without discomfort, and in a few weeks the patient was discharged as cured."

This article appealed so forcibly, as both rational and practical, that I was led to adopt it at once and have subjected the method to three years of almost daily trial and in the various stages of trachoma.

To appreciate the indications for squeezing in the treatment of trachoma, it will be well to bear in mind the natural history of the disease. Though the lines are not closely drawn, in the course of the disease may be recognized three over-lapping stages.

1st—The Inflammatory.
2d—The Follicular.
3d—The Cicatricial.

In the flrst the epithelial structures are principally affected and the enlargement of the pappillæ has led to the term, papillary hypertrophy.

In this stage, it is my opinion, that squeezing is contraindicated. The inflammation. is acute, and the treatment has not been found to shorten the disease. With the subsidence of the acute process, which may be shortened by sacrification and astringents, one is able to observe the characteristic of the *second* stage.

The hypertrophied pappillæ may be seen interspersed with the follicles, which, by their color and increasing prominence, lead to no possible mistake in the diagnosis. With the further progress of the disease they become the ruling factor of the process. They infiltrate the hypertrophied pappillæ and may be seen in masses or folds corresponding to those of the conjunctiva. They may be more or less extensive, in one case being limited to a few follicles and in another omnipresent with the conjunctival area, resembling the ovary of the fish. Lying beneath the epithelial surface they are by it protected against their rational caustic treatment which has so often been seen to result in the deplorable destruction of the tarsal and retrotarsal mucous surface, resulting in ptosis, entropion and blepharo-phimosis. The poisonous contents of these follicles, rather than the roughened surface, is to be held accountable for the recurrent ulcers of the cornea, which result from the corneal invasion of septic agents.

The presence of the follicles in the tissue stimulate the secretion of a protective exudate, the organization of which results in the cicatrization, which characterizes the *third* stage.

So long as the follicles remain to excite irritation, the cicatrization continues. The *second* stage may thus be seen to lap over the *third*, which is often prolonged months or years by the presence of more or less follicles which being situated deep in the tarsus or concealed in the retrotarsal fold, resist the efforts of nature or elude the vigilance of art. The curative method of nature is that of siege and many cases of trachoma

result in spontaneous recovery, but with a loss of a large portion of the mucous surface which has been transformed into cicatricial tissue. The *caustic* method of the past has imitated the method of nature and secured the end in a shorter time by artificially destroying the epithelium and hastening the cicatrization. This irrational proceedure has been pushed still further by some of the prominent French surgeons who have advocated the excission of the retrotarsal folds maintaining that the disease is not cured until the whole area of trachoma development is destroyed.

The mycological development of the last decade has changed all this. After the primary stage of epithelial inflammation, the diseased germs infest the follicles, and the problem is, therefore, to remove them as they develope with the least possible destruction of the mucous membrane.

By mechanically squeezing the area, underlying which the follicles may be seen, the pressure causes a rupture of the surface permitting the extrusion of the follicular contents and is followed by healing with no loss of tissue. In the secondary stage this may require repetition one or more times, because there are often numerous small follicles which are not sufficiently developed to permit of their removal. But if the case is seen in the cicatricial stage, when the battle of supremacy is being waged by the two contending forces, a single squeezing is often sufficient to reverse the balance of power and effect a permanent cure.

The method of effecting this deserves some comment.

The failure of Mandelstamm's suggestion to obtain recognition was probably due to its narrow limit of availability. Squeezing between the thumbs is not applicable to the lower lid and available in the treatment of the upper lid in only a small proportion of very chronic cases. Hotz, in his article, speaks of having used an old-fashioned iris forceps.

For the first two years of my experience with the method, a curved clot forceps was employed, but so often was it found ineffectual in removing the concealed follicle that an attempt has been made to supply a need, which it is believed exists.

In the construction of an efficient trachoma forceps three qualities have been deemed essential: First, that the shape should render accessible every point of the conjunctural surface; second, that sufficient strength should be possessed to express the follicular contents when occurring beneath the tarsus; third, that the terminal extremity should be of round or oval wire to prevent laceration of the mucous membrane which is always delicate and often atrophied.

These requirements have been communicated to Geo. Tiemann & Co., who has produced this forceps which has been found to meet the demand. Since receiving it a few months ago I have effected a cure in a number of chronic cases which had resisted treatment, in which the follicles were

wholly inaccessible by means of the thumbs or any forceps in my possession. By means of this instrument it has been found possible to reach the commisural angles of the retrotarsal folds, carruncle, plica-semilunaris, and besides to remove the granulations from under the bulbur conjunctiva though extending to the limbus corneæ.

The hemorrhage in these operations is generally slight and believed to exert a favorable influence on the disease. The pain, in considerable measure, may be controlled by 8 per cent. solution of cocoaine muriate, and still more effectually by the use of bromide of ethyl, which, when properly administered, secures anæsthesia in from thirty to sixty seconds, which lasts but from one to two minutes and seldom leaves so much as a headache.

It must not be understood that squeezing is considered a substitute for all other treatment. Many cases of this persistent disease will test the patience of the patient and the tact of the physician in conducting the disease through the second stage until there are no new crops of follicles to be squeezed out. It will be found necessary to exercise intelligence in the selection of agents to control the inflammatory conditions of the lids as well as the complications of the cornea and iris which may exist.

Attention to the general health must not be overlooked; neither must the condition of the lachrymal drainage be ignored. The surgical indications furnished by entropion and blepharo-phimosis must also receive efficient and prompt attention, for the eye is but an organ of the physical economy and is dependent upon the general condition as well as the local environment for the successful operation of its special function.